

CONT

substrate 300 and polysilicon gate. That is, the biases assembly provided in the present invention is not limited to about 250-450W or about 150-300W. Any bias assembly which achieves cleaning as well as the amorphization function is within the scope of the invention. The degree of the amorphization can be adjusted with different degrees of argon ionization or with different substrate biases.

A4

IN THE CLAIMS:

Please cancel claims 3 and 8 without prejudice and disclaimer.

Please amend claims 1,4-7, and 9-12 as follows:

Step A3

1. (Amended) A method for treating a silicon substrate, comprising:

placing the silicon substrate into a sputtering chamber;

performing a sputtering step to simultaneously dry clean and amorphize the silicon

Step B4

substrate surface by first using the sputtering chamber; and

depositing a titanium film on the amorphized silicon substrate by second using the same sputtering chamber, wherein the sputtering chamber is an ionized metal plasma (IMP) equipment unit.

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4. (Amended) A method for treating a silicon substrate having a surface, comprising:

providing a pre-processing chamber, wherein the pre-processing chamber has first and

second power supplies for sputtering argon therein, wherein the first power supply can provide

the argon with a first bias, and the second power supply can provide the silicon substrate with a

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second bias;

placing the silicon substrate into the pre-processing chamber;

providing the first bias to the argon;

providing the second bias to the silicon substrate;

modifying the first bias and the second bias to sputter the argon to simultaneously dry clean and amorphize the substrate surface;

forming a metal film on the amorphized substrate surface;

performing an annealing step, so that the metal film is reacted with the substrate surface to form a metal silicide layer; and

removing the metal film which is not reacted with the substrate surface.

5. (Amended) The method of claim 4, wherein the first bias is substantially higher than the second bias.

6. (Amended) The method of claim 4, wherein dry cleaning and amorphizing the substrate surface and forming the metal film are performed in different chambers.

7. (Amended) The method of claim 4, wherein dry cleaning and amorphizing the substrate surface and forming the metal film are performed within the same chamber.

9. (Amended) The method of claim 4, wherein the metal film is deposited in the pre-processing chamber.

10. (Amended) The method of claim 4, wherein the metal film is made of titanium (Ti).

11. (Amended) The method of claim 4, wherein the metal film is made of cobalt (Co).

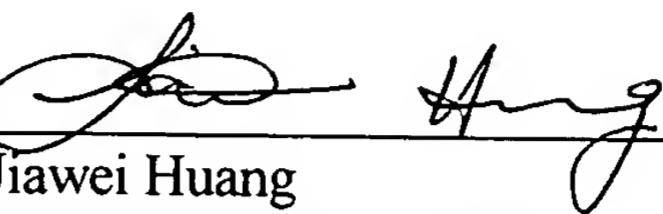
12. The method of claim 4, wherein the metal film is deposited by TiCl₄-based CVD.

Please add new claim 13:

13. (New) The method of claim 4, wherein the metal film is formed on the amorphized substrate surface at a temperature of about 540°C.

Respectfully submitted,

Dated: 2/11/2002

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2025 RELEASE UNDER E.O. 14176